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Khannan Suntharam
Baker Botts L.L.P.
One Shell Plaza
910 Louisiana Street
Houston, TX 77002-4995

EXAMINER

LEE, PHILIP C

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/770,571

Applicant(s)

TAWIL ET AL.

Examiner

Philip C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. This action is responsive to the amendment and remarks filed on October 17, 2005.
2. Claims 1-5 and 7-34 are presented for examination and claim 6 is cancelled.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections – 35 USC 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, 7-8, 23-25, 27-31 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunlock, U.S. Patent 6,606,630 (hereinafter Gunlock) in view of Blumenau et al, U.S. Patent 6,931,440 (hereinafter Blumenau).

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6. Gunlock was cited in the last office action.
7. As per claim 1, Gunlock taught the invention substantially as claimed comprising:
 - a high speed network interconnect (col. 6, lines 17-26; fig. 1) ;
 - multiple target devices coupled to the high speed network interconnect, wherein each target device has a unique hardware address (fig. 1; col. 6, lines 17-26; col. 8, lines 13-25);
 - multiple host devices, wherein each host device comprises a host bus adapter operable to perform a port login with a target device (col. 4, lines 58-63; col. 6, lines 32-48; col. 8, lines 25-27); and
 - a unique hardware address table stored in a memory location accessible by each host bus adapter (col. 6, lines 40-43), wherein the unique hardware address table stores the unique hardware address of every target device that each respective host is authorized to access (col. 9, lines 54-62; col. 8, lines 13-27, 38-47).
8. Gunlock did not teach not attempting to perform a port login with a target device unless the unique hardware address of that target device is present on the unique hardware address table. Blumenau taught a similar system wherein a unique hardware address of a target device must be present in a unique hardware address table to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.).

9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the reliability in Gunlock's system by allowing a component of the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

10. As per claim 2, Gunlock and Blumenau taught the invention substantially as claimed in claim 1 above. Gunlock further taught wherein the unique hardware address is a port name (col. 8, lines 21-25).

11. As per claim 3, Gunlock and Blumenau taught the invention substantially as claimed in claims 1 above. Gunlock further taught wherein the unique hardware address is a node name (col. 8, lines 21-25).

12. As per claim 5, Gunlock and Blumenau taught the invention substantially as claimed in claim 1 above. Gunlock further taught wherein at least one target device is a storage device (col. 6, lines 17-24; col. 7, lines 19-20).

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13. As per claims 7 and 8, Gunlock and Blumenau taught the invention substantially as claimed in claim 1 above. Gunlock further taught wherein the high speed network interconnect is a high speed optical network interconnect (col. 6, lines 17-21).

14. As per claims 23 and 29, Gunlock taught the invention substantially as claimed comprising:

a memory (col. 6, lines 40-43);

a unique hardware address table stored in a memory (col. 6, lines 40-43), operable to contain one or more unique hardware address corresponding to one or more target device with which the host bus adapter is authorized to access(col. 9, lines 54-62; col. 8, lines 13-27).

15. Gunlock did not specifically teach attempting to perform a port login. Blumenau taught a similar system wherein a unique hardware address of a target device must be present to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.).

16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the reliability in Gunlock's system by allowing a component of

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the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

17. As per claims 24 and 30, Gunlock and Blumenau taught the invention substantially as claimed in claims 23 and 29 above. Gunlock further taught wherein the unique hardware address is a port name (col. 8, lines 21-25).

18. As per claims 25 and 31, Gunlock and Blumenau taught the invention substantially as claimed in claims 23 and 29 above. Gunlock further taught wherein the unique hardware address is a node name (col. 8, lines 21-25).

19. As per claims 27 and 33, Gunlock and Blumenau taught the invention substantially as claimed in claims 23 and 29 above. Gunlock further taught wherein the target device is a storage device (col. 6, lines 17-24; col. 7, lines 19-20).

20. As per claims 28 and 34, Gunlock and Blumenau taught the invention substantially as claimed in claims 1, 23 and 29 above. Gunlock further taught wherein the HBA comprises the memory (col. 6, lines 40-43).

21. Claims 4, 9-22, 26 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunlock and Blumenau in view of Blumenau et al, U.S. Patent 6,665,714 (hereinafter Blumenau et al).

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22. Blumenau et al, U.S. Patent 6,665,714 was cited in the last office action.

23. As per claims 4, 26 and 32, Gunlock and Blumenau taught the invention substantially as claimed in claims 1, 23 and 29 above. Gunlock and Blumenau did not specifically teach the unique hardware address is a World-Wide Name. Blumenau et al taught wherein the unique hardware address is a World-Wide Name (col. 6, lines 65-67; col. 22, lines 4-11).

24. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau et al because Blumenau et al's teaching of World-Wide Name would enhance Gunlock's and Blumenau's systems by providing a unique identification for identifying each storage device (col. 22, lines 7-11).

25. As per claim 9, Gunlock taught the invention substantially as claimed for managing the port login performed by a host bus adapter for a host that is communicatively coupled to a fabric, wherein one or more target devices, each having a unique hardware address, are coupled to the fabric (fig. 1, lines 17-26; col. 8, lines 13-25) comprising:

determining whether the unique hardware address of an available target device is present on a unique hardware address table stored in a memory location associated with the host bus adapter, wherein the unique hardware address table contains the unique

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hardware addresses of each target device that the host is authorized to access (col. 8, lines 13-27; col. 6, lines 37-42).

26. Gunlock did not teach performing a port login with target device whose unique hardware address is present. Blumenau taught a similar system wherein a unique hardware address of a target device must be present to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.).

27. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the reliability in Gunlock's system by allowing a component of the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

28. Gunlock and Blumenau did not teach querying for available target devices. Blumenau et al taught from the host bus adapter, querying the fabric for available target devices and receiving at the host bus adapter an identification of available target devices (col. 6, lines 62-col. 7, line 12; col. 8, lines 35-36; col. 21, lines 67-col. 22, lines 14).

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29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau et al because Blumenau et al's method of querying the fabric for available target devices would increase the efficiency of Gunlock's and Blumenau's systems by avoiding login attempt to unavailable target devices by the host.

30. As per claim 16, Gunlock taught the invention substantially as claimed for managing a port login performed by a host bus adapter for a host that is communicatively coupled to a fabric, wherein one or more target devices, each having a unique hardware address, are coupled to the fabric (fig. 1, lines 17-26; col. 8, lines 13-25); comprising the steps of:

storing the unique hardware address of the selected target devices to a unique hardware address access table (col. 4, lines 58-63; col. 6, lines 40-43; col. 8, lines 13-25).

31. Gunlock did not teach not attempting to perform a port login with a target device unless the unique hardware address of that target device is present on the unique hardware address table. Blumenau taught a similar system wherein a unique hardware address of a target device must be present in a unique hardware address table to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.).

32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the reliability in Gunlock's system by allowing a component of the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

33. Gunlock and Blumenau did not teach querying for available target devices. Blumenau et al taught from the host bus adapter, querying the fabric for available target devices and receiving at the host bus adapter an identification of available target devices (col. 6, lines 62-col. 7, line 12; col. 8, lines 35-36; col. 21, lines 67-col. 22, lines 14).

34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau et al because Blumenau et al's method of querying the fabric for available target devices would increase the efficiency of Gunlock's and Blumenau's systems by avoiding login attempt to unavailable target devices by the host.

35. As per claims 10 and 17, Gunlock, Blumenau and Blumenau et al taught the invention substantially as claimed in claims 9 and 16 above. Gunlock further taught wherein the unique hardware address is a port name (col. 8, lines 21-25).

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36. As per claims 11 and 18, Gunlock, Blumenau and Blumenau et al taught the invention substantially as claimed in claims 9 and 16 above. Gunlock further taught wherein the unique hardware address is a node name (col. 8, lines 21-25).

37. As per claims 12 and 19, Gunlock, Blumenau and Blumenau et al taught the invention substantially as claimed in claims 9 and 16 above. Blumenau et al further taught wherein the unique hardware address is a World-Wide Name (col. 6, lines 65-67; col. 22, lines 4-11).

38. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau et al because Blumenau et al's teaching of World-Wide Name would enhance Gunlock's and Blumenau's systems by providing a unique identification for identifying each storage device (col. 22, lines 7-11).

39. As per claims 13 and 20, Gunlock, Blumenau and Blumenau et al taught the invention substantially as claimed in claims 9 and 16 above. Gunlock further taught wherein the target device is a storage device (col. 6, lines 17-24; col. 7, lines 19-20).

40. As per claims 14 and 21, Gunlock, Blumenau and Blumenau et al taught the invention substantially as claimed in claims 9 and 16 above. Gunlock further taught wherein the HBA comprises the memory (col. 6, lines 40-43).

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41. As per claims 15 and 22, Gunlock, Blumenau and Blumenau et al taught the invention substantially as claimed in claims 9 and 16 above. Gunlock further taught wherein the high speed network interconnect is a high speed optical network interconnect (col. 6, lines 17-21).

CONCLUSION

42. Applicant's arguments with respect to claims 1-5 and 7-34, filed 10/17/05, have been fully considered but are moot in view of new grounds of rejection.

43. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kamano et al, U.S. Patent 6,968,434, disclosed a method of determining the authentication of hosts accessing a target device based on a unique address table.

44. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization

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where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

P.L.


JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100